

### **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

1. (Currently Amended) An optical pickup apparatus for reproducing and/or recording information on an optical information recording medium, comprising:
  - a light source to emit a light flux with a wavelength in the range of 200-700 nm, the emitted light flux having a light intensity distribution in nearly Gaussian distribution;
  - a light intensity distribution converting element to transform the light intensity distribution of the light flux emitted by the light source into a desired light intensity distribution, wherein a light intensity of an outgoing light passing through an outermost periphery of an effective aperture of the light intensity distribution converting element becomes 45%-95% of a light intensity of an outgoing light passing through an optical axis position of the light intensity distribution converting element; and
  - an objective optical element to converge a light flux emitted by the light intensity distribution converting element onto an information recording surface of ~~on~~ the optical information recording medium.
2. (Currently Amended) The optical pickup apparatus of claim 1, wherein the optical intensity distribution converting element transforms ~~[[a]]~~ the light intensity distribution in nearly Gaussian distribution of ~~[[a]]~~ the light flux emitted by the light source into a desired light intensity distribution, wherein ~~[[a]]~~ the light intensity of ~~[[an]]~~ the outgoing light passing through an outermost periphery of ~~[[an]]~~ the effective aperture of the light intensity distribution

converting element becomes 60%-80% of ~~[[a]]~~ the light intensity of ~~[[an]]~~ the outgoing light passing through ~~[[an]]~~ the optical axis position of the light intensity distribution converting element.

3. (Currently Amended) The optical pickup apparatus of claim 1, wherein the light intensity distribution converting element satisfies the following formula:

$$1.2 < (C/D)/(B/A) < 1.5$$

where A is a light intensity of an incident light around an outermost periphery of ~~[[an]]~~ the effective aperture, B is a light intensity of an incident light on an optical axis position, C is ~~[[a]]~~ the light intensity of an outgoing light around ~~[[an]]~~ the outermost periphery of ~~[[an]]~~ the effective aperture and D is ~~[[a]]~~ the light intensity of an outgoing light on ~~[[an]]~~ the optical axis position.

4. (Currently Amended) The optical pickup apparatus of claim 1, wherein the optical pickup apparatus comprises a beam expander, and wherein the beam expander comprises the optical intensity distribution converting element and at least one optical element ~~optical intensity distribution converting element is an element structuring a beam expander.~~

5. (Currently Amended) The optical pickup apparatus of claim 4, wherein the optical element or the optical intensity distribution converting element ~~one element structuring the beam expander~~ is displaceable along ~~[[an]]~~ the optical axis and wherein the beam expander has a spherical aberration correcting function.

6. (Currently Amended) The optical pickup apparatus of claim 4, wherein the optical element or the optical intensity distribution converting element~~one element structuring the beam expander~~ is fixed along ~~[[an]]~~ the optical axis and wherein the beam expander has a spherical aberration correcting function.

7. (Original) The optical pickup apparatus of claim 4, wherein the beam expander is Keplerian type.

8. (Original) The optical pickup apparatus of claim 5, wherein the beam expander is Galilean type.

9. (Canceled).

10. (Original) The optical pickup apparatus of claim 1, wherein the light intensity distribution converting element is provided separately from the objective optical element.

11. (Currently Amended) The optical pickup apparatus of claim 1, wherein the light intensity distribution converting element changes~~is partially changeable~~ a light intensity ratio of an outgoing light flux to an incident light flux according to the portion of the light intensity distribution converting element.

12. (Original) The optical pickup apparatus of claim 1, wherein a collimating element for emitting an infinite light flux in the case that a finite light flux is introduced thereto is arranged between the light source and the light intensity distribution converting element.

13. (Original) The optical pickup apparatus of claim 1, wherein an optical functional surface of the objective optical element comprises an optical path difference providing ring-shaped structure which includes ring-shaped zones around the optical axis and is structured so that the ring-shaped zones provide pre-defined optical path differences to light fluxes passing through the each ring-shaped zone between light fluxes passing through neighboring zones.

14. (Original) The optical pickup apparatus of claim 13, wherein the optical path difference providing structure is one of a diffractive structure, a phase structure and multi-level structure.

15. (Currently Amended) The optical pickup apparatus of claim 1, wherein the objective optical element has a numerical aperture NA of 0.65 ~~and~~ or more.

16. (Original) The optical pickup apparatus of claim 1, the objective optical element is tilted to the optical axis so that a comatic aberration is corrected.

17. (Original) The optical pickup apparatus of claim 1, wherein the objective optical element is formed by a plastic material.

18. (Original) The optical pickup apparatus of claim 1, wherein the objective optical element is formed by a glass material.

19. (Original) The optical pickup apparatus of claim 1 further comprising a chromatic aberration correcting element.

20. (Original) The optical pickup apparatus of claim 1, which further comprises a plurality of light sources and conducts information recording and/or reproducing on various optical information recording media.

21. (New) The optical pickup apparatus of claim 20, wherein the light source emits the light flux with a wavelength in the range of 380 - 450 nm,

wherein the optical pickup apparatus further comprises at least one of a second light source and a third light source, the second light source emitting a second light flux with a wavelength in the range of 600 - 700 nm and the third light source emitting a third light flux with a wavelength in the range of 770 - 830nm, and

wherein the objective optical element converges the light flux emitted by the light intensity distribution converting element onto the information recording surface of the optical information recording medium comprising a protective layer whose thickness is 0.1 - 0.7mm, converges the second light flux onto an information recording surface of a second optical information recording medium comprising a protective layer whose thickness is 0.5 - 0.7mm and converges the third light flux onto an information recording surface of a third optical information recording medium comprising a protective layer whose thickness is 1.1 - 1.3mm.

22. (New) The optical pickup apparatus of claim 21, wherein the optical pickup apparatus comprises a beam expander,

wherein the beam expander comprises the optical intensity distribution converting element and at least one optical element, and

wherein the beam expander emits the light flux to the objective optical element as a parallel light flux, emits the second light flux to the objective optical element as a divergent light flux and emits the third light flux to the objective optical element as a divergent light flux,

23. (New) The optical pickup apparatus of claim 1, wherein the light flux incident to the optical intensity distribution converting element is a parallel light flux and the light flux emitted from the optical intensity distribution converting element is a parallel light flux.